Mini-TOWER AMIGA® 1200

ASSEMBLY INSTRUCTIONS

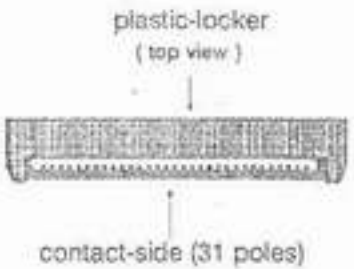
NOTE: Please read this manual chapterwise !
This tower case transforms the ordinary and difficult to expand Amiga 1200 into a professional machine which houses the complete A-1200 including all expansions and add-on boards, offering a wide range of versatile expansion options. Its assembly is very easy as the backplane was designed specially for the measurements of the A-1200 mainboard and its external connectors.

The case has three 5.25" and five 3.5" drive bays of which 3 have external access and 2 are only inside (freely useble for hard drives). The original A-1200 floppy drive is placed into one of the 3.5" drive bays and fitted with a 3.5" special front bezel that is included in the kit. Real time clock and keyboard interface are included on the bus-expansion board.

DISASSEMBELY OF THE A-1200

After the 8 screws at the bottom of the case are removed the top cover of the A-1200 is to be taken off.

Please make sure there are no electrostatical charges in your workplace, as this may damage the curcuits of the machine.



Unfasten the locker of the keyboard connector on the mainboard by pulling up the plastic locker at both sides with a screwdriver until the flex-cable can be pulled out easily.
Then you remove the keyboard and the floppy drive (1 screw).
Thereby, please note the polarity of the plug of the floppy drive data cable. Please nod this down exactly as this is important for the later assembly steps.
Also take off the sheet metal and the supporting angled metal from the sides of the floppy drive, if there are any.

The next thing is to remove the upper shielding. Loosen the screw at the middle of the lower boarder of the sheet metal. The 9 tongues at the edges of the metal shield can be easily bent upwards with a flat screwdriver and then straightened out with pilers.

Then the mainboard is lifted out of the case. After all the hexagonal bolts are removed from the sockets at the rear edge of the mainboard, the lower shielding is taken off too. For this a 5 mm nut (or pliers) are needed.

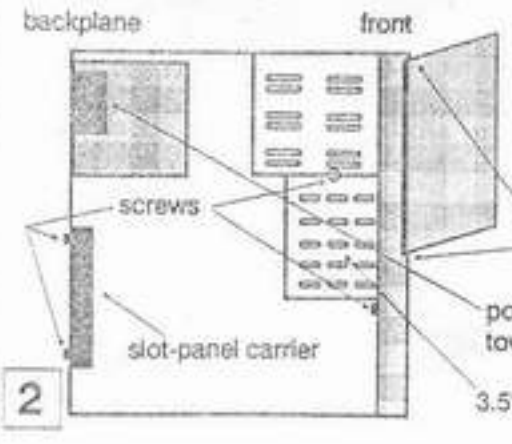
The two shielding metal sheets are not needed anymore.

ASSEMBLY INTO THE TOWER CASE

First you remove the 6 screws at the rear of the case and lift off the lid of the tower up- and backwards. Take out the bag with the small parts and empty it out onto a plate or some such container.

Then sort the screws by type of threat and size to ease up the assembly. There are metrical M3-screws for most assembly steps and for example floppy drives as well as some screws with inch-threats.

The opened dust-cover door at the front of the case (see picture below [1]) can be easily removed temporarily by grabbing it with both hands in the middle and bending it so far that the two hinge-bolts can be pulled out of the bearings without damage.



Then the tower frame is layed onto the table sideways, so that the bottom of the case points towards you, the backplane lies left and the front to the right.

Then unscrew the slot-panel carrier that is held by 4 screws at the backplane of the tower (picture page 2, [2]) and remove the 3.5" drive cage that is held by 2 screws (picture page 2, [3]).

Check the positioning of the preinstalled insulation plastic sheeting inside the case underneath the position of the mainboard. If it got loose in transport, press it against the metal on the sticking gluepoints.
Now the mainboard of the A-1200 is placed loosely into the case and the external Sub-D connectors of the mainboard put through the wholes of the backplane. Then the board is screwed loosely onto the short hexagonal bolts at the right edge of the mainboard with 2 short M3-screws (see drawing page 5, [B]).

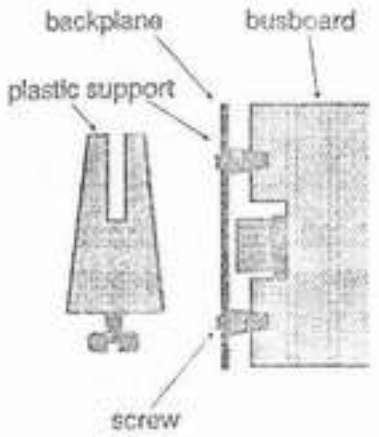
Then the hexagonal bolts are screwed back into the Sub-D connectors at the back of the tower. By this the mainboard will get additional support. Please don't fasten the hexagonal bolts too much with the 5 mm nut (or pliers) as it is easy to overturn them while destroying the threat. They should be just so tight that a plug that is fixed onto the connector can be easily removed without the hexagonals coming loose again when unscrewing the plug.
Only if you don't have a busboard, now finally tighten the two short M3-screws (picture page 5, [B]).

Mounting the A-1200 zorro-slot busboard

If you don't have a bus-expansion board yet, please go on to the next chapter of these instructions.
Above the connectors "SERIAL" and "COMP.-VIDEO" you'll find 2 wholes where the plastic supports of the busboard are to be mounted (see drawing, page 4).

Turn out the screws from the two included plastic supports and fit them through the wholes from outside, then hold the plastic supports against them from inside so that the opening lies horizontal. Don't tighten the screws yet, so that the supports remain movable and can later receive the edge of the busboard to guide and support it.

Now, if you have one, plug the AT-bus (IDE) hard drive cable onto the connector of the mainboard, as to do this later would be difficult.



Take the expansion port connector off the busboard and plug it onto the expansion port of the mainboard so that the gold-contacts point to the upper end of the tower and the two connector sockets upwards. Then finally tighten the two short M3- screws at the edge of the mainboard (position, see picture page 5, [B]).

The keyboard interface is included on the busboard. Open the lockers of the flex-cable connectors (drawings, pages 1 & 6, [F]) at the edge of the busboard and on the mainboard (pull it up). The green flex-cable is plugged in first onto the mainboard with its polarity so that the carbon side faces the backplane and the enforced plastic side facing away from the backplane. Push the locker back in.
Then lay the busboard into the tower at a slanted angle, whereby you first plug in the flex-cable with the right polarity and then lock it. Then you insert the left edge of the board into the opening of the plastic supports (see picture above) whereby the flex-cable is layed underneath the busboard. Then the right edge of the board is lowered, so that the expansion port connectors are fitted together properly and the board is resting on all the hexagonal distance bolts.
Then fasten the board with 4 M3-screws on the distance bolts (positions, see picture page 6, [G]) and finally tighten the 2 screws of the plastic supports at the backplane of the tower. Now also mount the slotpanel carrier with its 4 screws back onto the backplane (picture page 2, [2]).

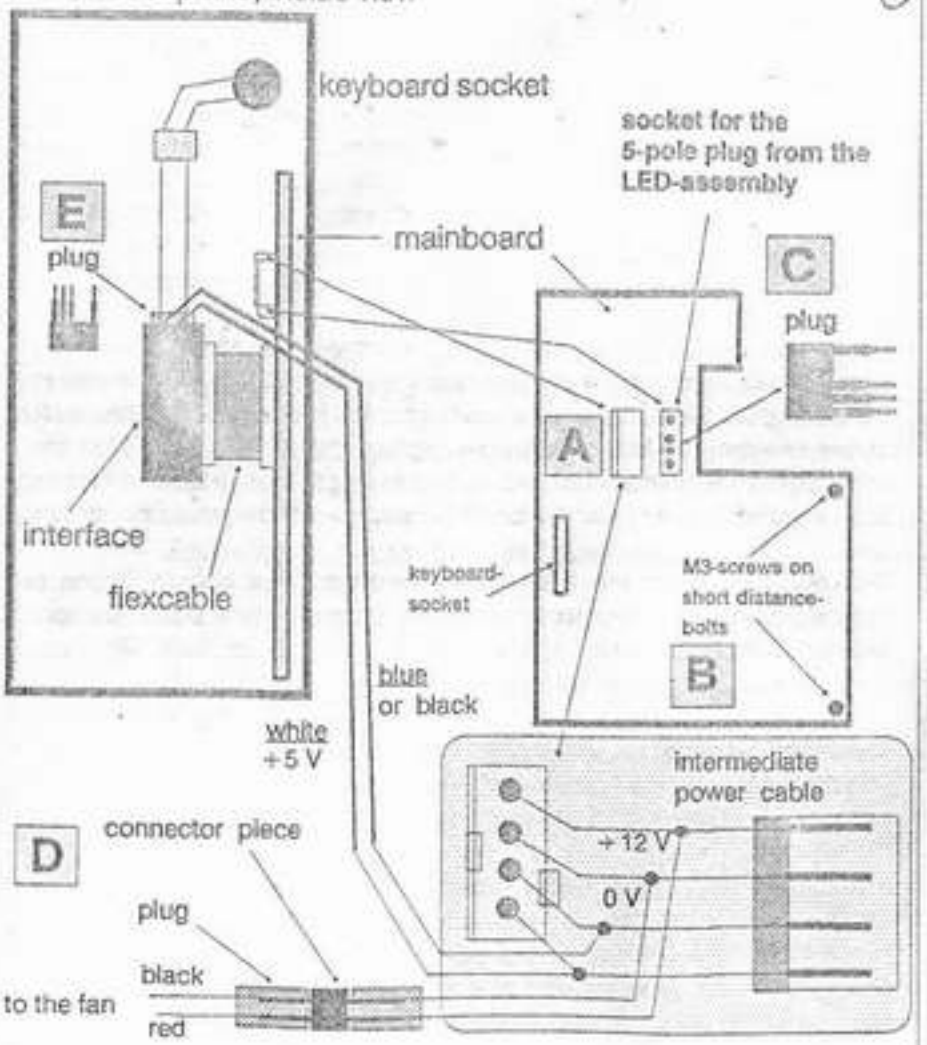
The switch panel mit the MHz display at the front of the tower is connected with the busboard by a 7-pole reset/turbo/keylock/LED plug (see drawing of the busboard, page 6 [H]).

Also connect the plugs of the keyboard socket [I] and the cooling fan [J] with the right polarity. The 5-pole and 7-pole flat plugs have an unused pin-position for designation of their polarity.
Polarity of the 2-pole fan cable: red is to be connected with " + 12 V", black with "GND" (as printed on the busboard).

Connection of keyboard interface and plugs in the A-1200 Tower

(without busboard)

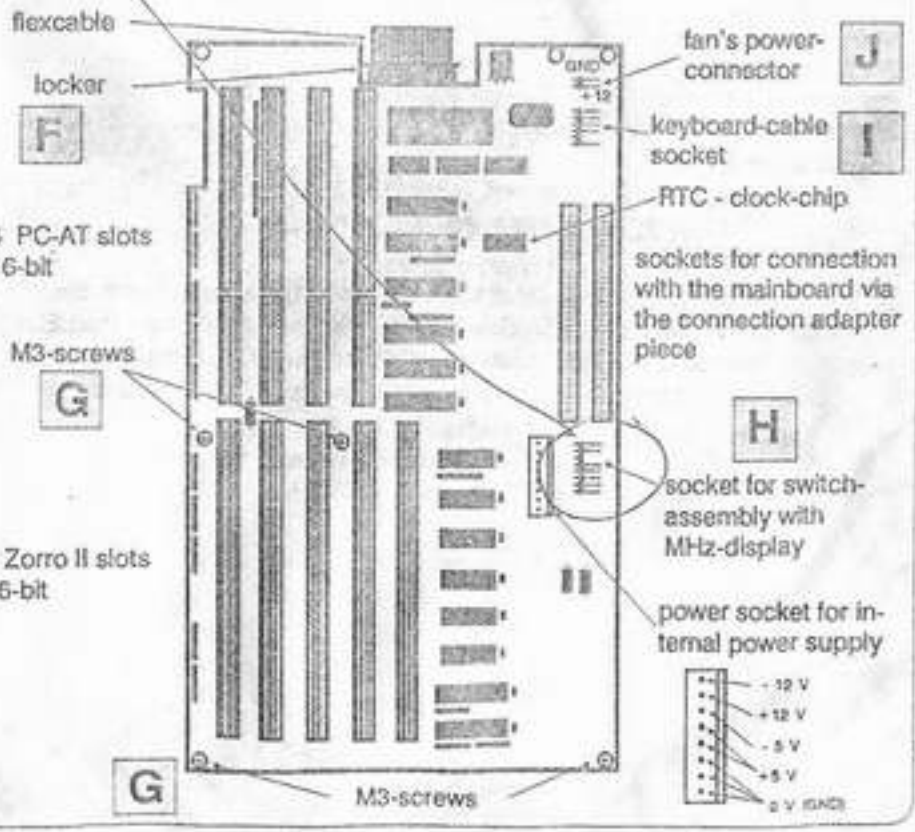
tower-backplane, inside view



ASSEMBLY WITHOUT BUS-BOARD

Now mount the slot-panel carrier with its 4 screws back onto the backplane (picture page 2, [2]).
Open the locker of the flexcable socket (picture, page 1) on keyboard interface and mainboard (pull it up). Plug in the flexcable of the keyboard interface on the top side of the mainboard so that the carbon contact side sits pointing to the backplane of the tower (the enforced plastic side points away from it).
Push the locker in. Then plug the other end of the flexcable into the interface, with its polarity so that the carbon contact side sits facing the metal contacts in the socket. Then push the locker in (see also picture, page 5).

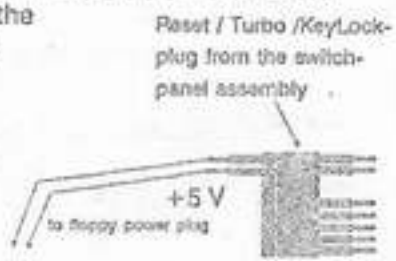
A-1200 Bus-Expansion Board



Glue the interface box onto the slot panels of the backplane and connect the plug of the keyboard socket with the interface (heed polarity). (See picture page 5 [E]).

The keyboard interface is supplied with +5 V power. For this you plug the short floppy drive power cable piece onto the disk drive power connector of the mainboard and then the 30 cm long 3.5" floppy drive power cable onto the short cable. Connect the 2-pole plugs for the power of the 12 V cooling fan using the included pair of connection pins (see picture, page 5 [D]); equal colours go together.

The flat 7-pole female plug is to be connected with a 2-pole male plug that sits in a 7-pin wide plug casing branching off the other end of the floppy drive power cable. By this the +5 V power of the power cable is connected with the MHz-display. When plugging the connectors together, please make sure that the open pin-positions are facing each other, so that the polarity is right.



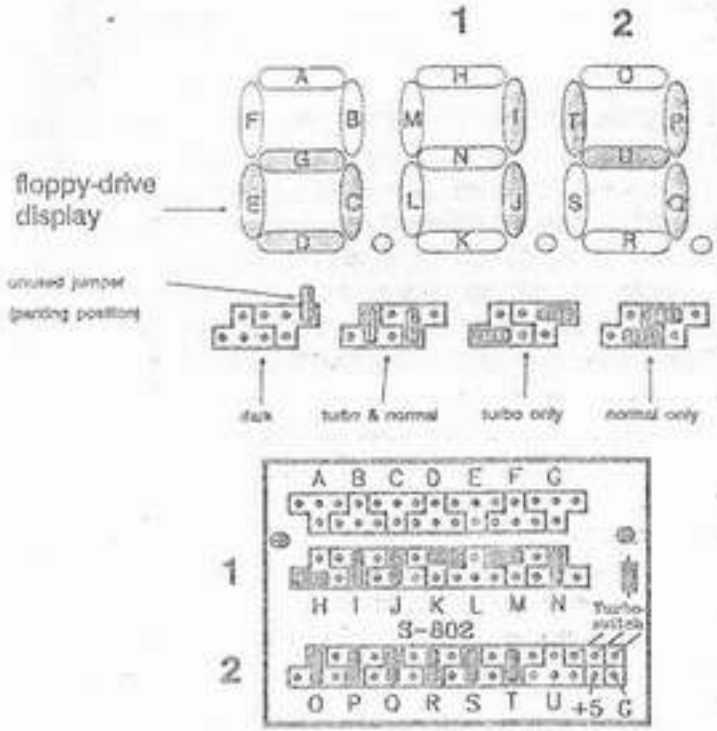
FURTHER ASSEMBLY STEPS

Now you connect the 5-pole plug of the frontpanel LED-assembly with the connector for the keyboard LED-assembly on the mainboard where the LED-plug of the keyboard was before (see drawing, page 5 [C]). Please don't mix up the plug of the LED-assembly [C] with the one of the keyboard socket [E] or [I] as they look the same.
Then please make a test-run to see if a power-on message appears.
The green power-LED and the MHz-display have to come on.

The front-panel switch assembly with the MHz-display comes preadjusted (14 / 50 MHz) if you have the type with jumpers. You can adjust the display to your needs before you mount the 3.5" drives and their cage again.
The jumpers have to be placed according to a certain systematic logic which is depicted on page 8 so that each single segment of each digit shows the correct operation.
For each segment you have to assign by one of 3 possible jumper positions

if it's always off, or lit up only at switch position "normal", only at "turbo", or lit always, no matter what switch position. You can draw a plan first showing how the jumpers should be positioned, or you just plug the jumpers when the power is on and try so long until the display is correct at both positions of the turbo-switch.

Factory-default setting of the MHz-display, type 1 = S-802



Tuning the MHz-display, type = S-803

The electronical adjustment of the display values is done by pressing the RESET button.
First you set the turbo-switch to "normal" and press the reset button for a few seconds. The display figures start to run. When the value is approaching the should-be-figure (14), let go of the reset button.
Then press it briefly for a few more times until the display value reaches its proper value in single-step mode.

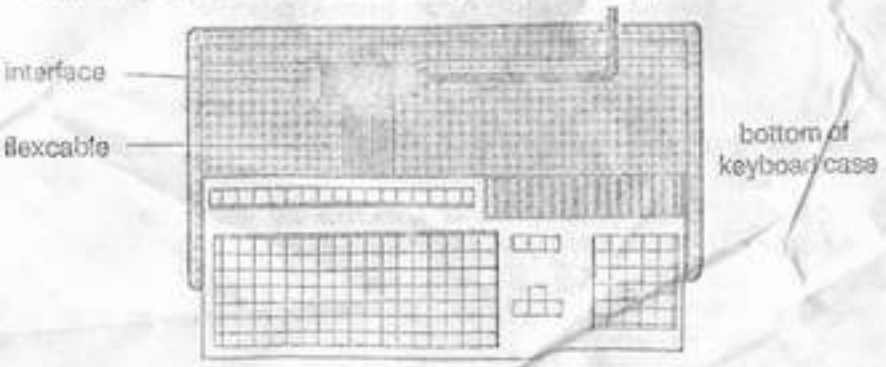
Then switch to "turbo" and repeat the above tuning procedure until the display figures have reached the proper value for turbo (50).

The original A-1200 floppy drive is mounted into the 3.5" drive cage. Mount the drive cage with the floppy drive installed back into the tower directly behind the new front bezel and push the drive towards the front as far as it will go, so as to support the bezel, whereby the pushbutton goes properly through the whole so that it stays moveable and un-blocked. There are 2 different drive bezels included because different manufacturers of drives make slightly different shapes of drives. Chose the bezel that better suits your drive and gets a more firm hold in the front panel by being supported by your drive. The bezel with longer "ears" fits Chinon drives.

In connecting the drive, heed the notes of the polarities of the plugs that you nodded down. Wrong polarity of the drive power-plug gives destroyed drive electronics. Wrong polarity of the data cable is not critical, but the select-LED of the drive is lit up all the time.
(Continue at "Final Assembly Steps", if you have a PC-keyboard version.)

ASSEMBLING THE AMIGA-KEYBOARD INTO THE KEYBOARD CASE

The LED-carrier board from the top lid of the A-1200 original case is not needed anymore in operation of the tower.
After unpacking the pieces of the keyboard case place the bottom on the table in front of you. Then lay the A-1200 original keyboard against the bottom of the case, centered sideways, keys facing up.



Now the position of the green flexcable indicates the should-be position of the keyboard interface box that you have to glue onto the bottom of the keyboard case at the rear end.
Pull off the cover of the double sided sticky tape and put the box of the interface electronics into its proper position.

Now you loosen the light grey locker of the broad socket of the interface and plug the end of the flexcable into it so that the carbon contact side is facing the metal contacts of the socket. Push it in as far as it will go and then lock the locker.

Now lay the keyboard upside down behind the bottom of the case and plug the round spiral cable into the interface on its left side. Then guide the round cable to the outside through the notch in the bottom of the case. Then screw the noose of the black grounding wire onto the bottom sheet metal of the keyboard, at the next screw-position that it can reach.

Lay the keyboard into its proper mounting position in the bottom of the case whereby the flexcable disappears unter the sheet metal of the keyboard. Then close the upper lid of the keyboard, turn it upside down and close the case with 6 screws at the bottom.
This is easyest to do if you lay the keyboard onto your legs with both ends.

The keyboard is now ready for connection with the tower.

FINAL ASSEMBLY STEPS

Make sure that everything is OK and connect the keyboard to the tower. Before you close the lid of the tower case, please make a test run of your A-1200, first without plug-in cards.

Then, only after this, plug in your slot cards, whereby it is good if you support the metal at the bottom side of the mainboard with your hand, and make another test run.

When pulling out the slot cards, it is useful if you push down the bus-board with your other hand.

Power up your computer as usual and check the functions.
At the end you can close the lid and put the 6 screws back in.
Then finally, mount the plinth with 4 screws.

ATTENTION:

If you are using the original Commodore transformer power supply you can operate one slot card on the busboard at the most. If you want to use more cards you should mount the strong internal power-supply into your tower.
If the tower-internal power supply is used, don't connect the external transformer power supply also - there could be system malfunctions
The turbo card runs only if the turbo switch is depressed.

The power-, HDD- and diskdrive- LED display is at the frontpanel of the tower, not at the keyboard anymore.
The floppy drive LED-display is integrated into the MHz-display, realized by 4 segments on its left side.

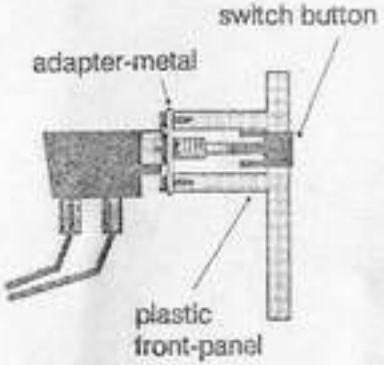
MOUNTING THE INTERNAL TOWER POWER SUPPLY

Disconnect the power supply of the fan at the backplane of the tower and take out the 4 screws of the sheet metal that is holding the fan. Take out the sheet metal together with the fan. The fan is not needed anymore.

Now bring the new power supply into the right orientation for mounting (fan up, mains sockets down). Lay the cables up and then insert the power supply into the tower from the top, whereby you turn it a bit so that it fits through the frame of the tower. Then fasten it with the 4 screws that you had removed from the sheet metal of the fan.

The next thing is to mount the power switch at the front panel of the tower. For this you can take out the 3.5" drive cage OR take off the front-panel of the tower, that is held by one screw right on top of the frame.

First you remove the piece of adapter-metal that is held by two screws at the inner side of the frontpanel. This adapter-metal you now screw onto the front of the mains switch with 2 M3-screws.



Then the switch is screwed onto the plastic front panel with 2 screws and the adapter-metal as shown in the picture to the left.

The yellow-green grounding wire with the noose must now be connected to the next free threat-whole of that part of the metal frame where the mainboard is mounted. Use an inch-threat screw for this.

PC-Keyboard-Interface
KEY-ASSIGNMENT TABLE

PC-Keyboard	AMIGA - Keyboard
End	Help
Del	Del
Ctrl left	Amiga left
Ctrl right	Amiga right
F12	Ctrl
Ins	Ctrl
Ctrl (L) + Ctrl (R) + Ins or F12	RESET = warm-boot
Alt (right) + Ctrl (L or R)	open menu (right mouse button)
Alt (left) + Ctrl (L or R)	chose menu (left mouse button)
Num (Num Lock)	[{
÷	] }
Home	\ |
Page up	/ (devide - slash)
Remaining key-assignments:	1 to 1.

Included in the delivery is a software-driver for the startup-sequence that can be used to reassign or alter the key-assignments at any time. Ideas and hints, as well as messages on wanted improvements of key assignment, useability and handling are welcome !